

1711/10

Confirmation No.: 4003

Date: March 2, 2004



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES



On re Application of:	)	Art Unit: 1771
	)	
Wolfgang SCHULZ	)	Examiner: C. Pratt
	)	
Appln. No.: 09/826,369	)	Washington, D.C.
	)	
Date Filed: April 5, 2001	)	March 2, 2004
	)	
For: AWNING FABRIC AND PROCESS	)	Confirmation No.: 4003
FOR PRODUCING SAME	)	
	)	ATTY.'S DOCKET: SCHULZ=2

**BRIEF ON BEHALF OF APPELLANTS**

U.S. Patent and Trademark Office  
2011 South Clark Place  
Customer Window, Mail Stop APPEAL BRIEF - PATENTS  
Crystal Plaza Two, Lobby, Room 1B03  
Honorable Commissioner for Patents  
Arlington, Virginia 22202

Sir:

The present appeal is taken from the action of the Examiner in finally rejecting Appellant's claims 1-2, 4-6, and 11-14. The full text of claims 1-2, 4-6, and 11-14 under appeal appears in Appendix A attached hereto.

**REAL PARTY IN INTEREST**

The real party in interest is Schmitz-Werke GmbH & Co., of Hansestrasse 87, D-48282 Emsdetten, Germany.

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**RELATED APPEALS AND INTERFERENCES**

Appellant is aware of no other related appeals or interferences.

**STATUS OF THE CLAIMS**

Claims 1-2, 4-6 and 11-14 presently appear in this case. Claims 1-2, 4-6 and 11-14 are under final rejection. Claims 7, 9, 10 and 15 were subject to a final restriction requirement, and claims 3, 7-10 and 15 have now been cancelled without prejudice toward the continuation of prosecution thereof in one or more continuing applications.

**STATUS OF AMENDMENTS**

The most recent rejection in this case was a final rejection of November 18, 2003. An amendment to the claims was filed on November 18, 2004. In an Advisory Action mailed on December 11, 2003, the Examiner indicated that the amendment would be entered upon filing of this appeal. Appellant accordingly understands that all amendments have been entered.

**SUMMARY OF THE INVENTION**

The present invention is directed to an awning fabric and a process for producing the awning fabric (page 1,

lines 7-8<sup>1</sup>). Awning fabrics are subject to weather damage, UV damage, tearing and dirt. Therefore, to meet the demands placed on awning fabrics in terms of UV light-fastness, resistance to tearing, weather resistance, and water and dirt repellency, they are conventionally produced from spin-dyed polyacrylnitrile (PAC) filaments using strong yarn with a count of Nm 34x2 (dtex 588) (page 1, lines 12-16). To obtain good water repellency, and sharply defined longitudinal stripes in the pattern, approximately 30 warp threads/cm and approximately 15 weft threads/cm are used in conventional awning fabrics (page 1, lines 16-18). The finished fabric is then provided with stiffening and water-repellent artificial resins<sup>2</sup> (page 1, line 18-19).

Other types of filament fabrics, having a weight per unit area of 300 g/sqm and above, were not accepted as useful for awning fabrics because of the lack of UV stability of the filaments and dyes (page 1, lines 21-24). These fabrics are also unduly heavy.

The present invention provides a fabric for awnings having the lowest weight per unit area along with good UV stability and weather resistance (page 1, lines 26-28). The

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<sup>1</sup> Reference to page and lines refer to Appellant's specification, unless otherwise indicated.

<sup>2</sup> This is consistent with the applied Xiao citation.

present invention uses polyester continuous filament yarn and/or polyester monofilament yarn (page 2, lines 4-7). Using the continuous filament yarn, the surface is smoother, which counteracts soiling. The polyester yarn provides increased resistance to tearing (page 2, lines 9-11).

The awning fabric according to the invention is wet-dyed, with an anthraquinone-based disperse dye. This permits the dyeing to take place in an aqueous solution at the processor's location, thus permitting a significant broadening of the limited color range (page 3, lines 8-13).

According to a preferred embodiment of the invention, the weight per unit area that is attainable within the framework of the invention is between 200 and 250 g/sqm. Based on this low weight per unit area, the awning fabric wraps when retracted with a lesser thickness and permits a wider distance between seams than the 120 cm that has been conventionally allowed. This results in a cheaper assembly of the awning cloth and an awning that can be built slimmer so that the undesirable so-called "Christmas-tree effect" that is caused by the superposed thickness of seam areas wound on top of one another in prior constructions is avoided (paragraph bridging pages 2-3). Further, the weight is considerably lower than that found in conventional awning fabrics (page 3, lines 3-6).

The inventive woven polyester fabric is wet-dyed with an anthraquinone-based disperse dye (page 3, lines 8-9). The disperse dyes that are used are nitro dyes, azo dyes, and anthraquinone dyes (page 3, lines 9-10). A UV block is provided, which permits the polyester yarns to be dyed wet with the required color fastness, (page 3, lines 15-16).

#### THE PRIOR ART

U.S. Patent No. 5,674,437 to Geisel ("Geisel")  
U.S. Patent No. 5,747,392 to Xiao et al. ("Xiao")  
U.S. Patent No. 4,679,519 to Linville ("Linville")  
U.S. Patent No. 5,914,444 to Reinert et al. ("Reinert")  
U.S. Patent No. 4,719,954 to Curtis et al. ("Curtis")  
U.S. Patent No. 5,652,057 to Delker ("Delker")

#### THE REJECTIONS

In the rejection of September 9 2003, claims 1-6 and 11 were rejected under 35 U.S.C. § 103(a) as being obvious from Geisel in view of Reinert. The Examiner stated:

Geisel is concerned with the creation of a fabric awning comprising polyester yarns, as set forth in the previous action. Geisel teaches a woven fabric (col. 3, line 25 and col. 5, lines 7-8). Geisel teaches continuous yarns (claim 3) and monofilaments (col. 3, line 23). Geisel teaches dip coating the fibers (col. 4, line 46), but does not specifically teach wet dyeing.

As set forth in the previous action, Reinert teaches wet dyeing with a triazine derived UV block and an anthraquinone based dye. It would have been obvious to a person having ordinary skill in the art to dye the fibers of Geisel according to Reinert's process. Such a modification would have been motivated by the desire to "isolate the fiber from the undesired effects of the environment (col. 4, lines 43-45).

Claim 12 was rejected under 35 U.S.C. § 103(a) as being obvious from Geisel in view of Reinert and Curtis. The Examiner stated:

The combination of Geisel and Reinert fail to teach articulated arms. Curtis is concerned with the creation of an awning fabric comprising articulated arms (fig. 1). It would have been obvious to a person having ordinary skill in the art to utilize articulated arms in the awning of Geisel and Reinert. Such a modification would have been motivated by the desire to improve the functionality of the awning.

Claims 13-14 were rejected under 35 U.S.C. § 103(a) as being obvious from Geisel in view of Reinert and Delker. The Examiner stated:

The combination of Geisel and Reinert fail to teach a delustrant and lubricant. Delker teaches that delustrants and lubricants are very common additives used in polyester mono filaments (col. 9, lines 35-45). It would have been obvious to a person having ordinary skill in the art to include these additives in the fibers of Geisel and Reinert. Such a modification would have been motivated by the desire to improve the properties of said fibers.

With respect to the claimed warp rate and weft density, it would have been an obvious modification to alter the weaving properties

of the fabric. Altering filament density is a common modification motivated by financial concerns and the desired properties of the awning.

Claims 1-6 and 11 were rejected under 35 U.S.C. § 103(a) as being obvious from Xiao in view of Linville and Reinert. The Examiner stated:

Xiao teaches a woven fabric comprised of polyester fibers (col. 4, lines 20-24). Because Xiao teaches the use of Afibers,@ as opposed to yarns, it is likely that Xiao is referring to monofilaments; however, this is not explicitly stated.

Linville teaches the use of polyester monofilaments in woven awning fabrics (col. 2, lines 38 and col. 4, lines 5-13). It would have been obvious to utilize monofilaments as fabric of Xiao. Such a modification would have been motivated by the desire to reduce the weight of the fabric.

The combination of Xiao and Linville fails to teach wet dyeing. As set forth in the previous action. Reinert teaches wet dyeing with a triazine derived UV block and an anthraquinone based dye. It would have been obvious to a person having ordinary skill in the art to dye the fibers of Xiao according to Reinert=s process. Such a modification would have been motivated by the desire to impart color to the fabric of Xiao while protecting from sun damage.

Claim 12 was rejected under 35 U.S.C. § 103(a) as being obvious from Xiao in view of Linville, Reinert and Curtis.

The Examiner stated:

The combination of Xiao, Linville and Reinert fail to teach articulated arms.



Curtis is concerned with the creation of an awning fabric comprising articulated arms (fig. 1). It would have been obvious to a person having ordinary skill in the art to utilize articulated arms in the awning of Xiao. Such a modification would have been motivated by the desire to improve the functionality of the awning.

Claims 13 and 14 rejected under 35 U.S.C. § 103(a) as being unpatentable over Xiao in view of Linville, Reinert et al. and Delker. The Examiner stated:

The combination of Xiao, Linville and Reinert fail to teach a delustrant and lubricant. Delker teaches that delustrants and lubricants are very common additives used in polyester mono filaments (col. 9, lines 35-45). It would have been obvious to a person having ordinary skill in the art to include these additives in the fibers of Xiao. Such a modification would have been motivated by the desire to improve the properties of said fibers.

With respect to the claimed warp rate and weft density, it would have been an obvious modification to alter the weaving properties of the fabric. Altering filament density is a common modification motivated by financial concerns and the desired properties of the awning.

#### ISSUES

The following main issues, each corresponding with one of the rejections, are presented in this Appeal.

1. Are claims 1-6 and 11 obvious from Geisel in view of Reinert under 35 U.S.C. § 103(a)?

2. Is claim 12 obvious from Geisel in view of Reinert and Curtis under 35 U.S.C. § 103(a)?

3. Are claims 13-14 obvious from Geisel in view of Reinert and Delker under 35 U.S.C. § 103(a)?

4. Are claims 1-6 and 11 obvious from Xiao in view of Linville and Reinert under 35 U.S.C. § 103(a)?

5. Is claim 12 obvious from Xiao in view of Linville, Reinert and Curtis under 35 U.S.C. § 103(a)?

6. Are claims 13 and 14 obvious from Xiao in view of Linville, Reinert and Delker under 35 U.S.C. § 103(a)?

#### **GROUPING OF CLAIMS**

For each rejection in which claims 1-2, 4-6 and 11-14 were rejected, claims 1, 2, 4, 6 and 12 each stand alone. Claim 5 stands or falls with claim 4. Claim 11 stands or falls with claim 1. Claims 13 and 14 stand or fall together, but separately from claim 1.

Appellant makes no admission that any of the claims are or are not patentably distinct from one another.

#### **ARGUMENT**

1. Claims 1-6 and 11 are not obvious from Geisel in view of Reinert under 35 U.S.C. § 103(a)

The rejection relies primarily on Geisel as the basic reference. Appellant respectfully notes that Geisel

relates to a luminescent extruded fiber comprising 80-99% by weight of a thermoplastic polymer, with the additional materials including a metal aluminate oxide pigment and plasticizer (column 2, lines 49-53). The entire focus and the main point of Geisel is the provision of luminescence to a fibrous material (column 1, lines 4-5), and this is achieved, as pointed out in the Abstract, by "combining a metal aluminate oxide pigment with a thermoplastic polymer, and then heating, mixing, and extruding the combination into a fiber." Also see column 2, lines 41 *et seq*; the sentence spanning columns 2 and 3; column 3, lines 7-13; and elsewhere, including much of column 4 and Example 1 at column 5.

As the rejection correctly points out, Geisel does mention woven fabrics and "bulked continuous fiber yarn." In addition, polyesters are mentioned among the "basket" or "shotgun" disclosure of thermoplastic polymers at column 3, lines 26 *et seq*, polypropylene being mentioned as "particularly preferred" and being the subject of the sole example.

It is true that Geisel may use coloring agents, but these are pigments added to the composition before extrusion or spinning of the Geisel fibers (see the paragraph spanning columns 4 and 5). No dying is disclosed.

The Examiner agrees that Geisel does not teach wet dyeing of any kind. On the other hand, the rejection notes that Geisel does teach "dip coating" (column 4, line 46). However, Appellant respectfully submits that such dip coating has nothing to do with dyeing. To dye by overcoating the luminescent fibers or yarns of Geisel would be to defeat the purpose of Geisel by at least partially (or even entirely) obscuring the luminescence of the fibers by the overcoated dye. Such a modification cannot have been obvious, as it would have been antithetical to Geisel.

The various coating methods generally mentioned by Geisel are to be used for applying other type of coating agents including (column 4, lines 49-52):

silica, polyalkylene glycols, polyalkylene glycol esters, polyalkylene glycol alcohols, quaternary amines, alcohol phosphate salts, long chain fatty acid esters, and long chain fatty alcohol esters.

No dyes are mentioned. To coat the fibers or yarns of Geisel with a dye which would tend to shield the luminescent pigment which has been incorporated into the interior of the fibers of Geisel would destroy or at least adversely reduce the intended function of Geisel, and thus could not have been obvious to the person of ordinary skill in the art.

The Examiner relies on Reinert to make up for the fact that Geisel does not teach wet dyeing. But the proposed

modification of Geisel based on Reinert, i.e. the proposed combination, would not have been obvious for at least two reasons. First, Reinert relates to the wet dyeing of a cellulosic fiber. This has nothing to do with Geisel's luminescent thermoplastic fibers.

The Examiner asserts that col. 21, lines 64 of Reinert teach dyeing polyester fibers also. Appellant respectfully disagrees. At col. 21, lines 62-64, Reinert discloses that "direct dyes are also suitable for treating hydroxyl-containing fibers present in blend fabrics, for example blends of cotton with polyester fibers...." Thus, the disclosure suggests using the direct dyes for blends, not for polyester fibers by themselves, i.e. the hydroxyl-containing fibers which are taught by Reinert to be dyed by the "direct dyes" are the cotton fibers in the blend not the polyester fibers which contain no hydroxyl groups. The person of ordinary skill in the art would have no reason or purpose, motive or incentive for even trying to wet dye Geisel's fibers based on Reinert's wet dyeing of the non-analogous cellulosic or blends of cellulosic with polyester fibers.

Second, Appellant has pointed out above that Geisel's "dip coating" has nothing to do with dyeing, or indeed coating the Geisel fibers with any coating agent which would shield or diminish the ability of Geisel's fibers to

provide luminescence. As stated above, to overcoat the Geisel fibers with a dye that would inhibit the ability of the Geisel fibers to luminess, would be to fly in the face of Geisel, and this would be the very antithesis of obviousness.

For the reasons pointed out above, the proposed combination would not have been obvious to the person of ordinary skill in the art at the time the present invention was made.

Moreover, even if the combination were obvious (not accepted by Appellant), such a combination would not reach the present invention. In this regard, Reinert may indeed teach wet dyeing with an anthraquinone-based dye, but it is not a **disperse** dye as called for in claim 1.

Reinert teaches the dyeing of cellulose fibers "with at least one direct dye and at least one UV absorber" (see the abstract). That the dyes of Reinert are direct dyes is repeated at several places, including the first paragraph of column 1 and the last line of column 1, and elsewhere, including column 2, lines 10 et seq. Direct dyes are dyes with polar molecules that are very soluble because of such polarity. Merriam-Webster's Third International Unabridged Dictionary defines a direct dye as "a water-soluble dye usually of the azo class that is used in alkaline or neutral solution especially for dyeing cellulosic material (as cotton or paper)

directly." The dye components adhere to the surface of the cellulose fibers due to dipole forces, Van der Waal forces or by hydrogen bridge connections. Disperse dyes, i.e. those incorporated into at least the surface of Appellant's polyester fibers, are quite different from direct dyes, even though both kinds may be anthraquinone-based.

Contrary to the direct dyes taught by Reinert which are soluble due to the polarity of the molecules, disperse dyes according to the present invention have non-polar or only weak-polar molecules which are not soluble in water. Merriam-Webster's Third International Unabridged Dictionary defines a disperse dye as "an insoluble dye used in the form of a dispersion (as in water) for dyeing acetate and other synthetic fibers." The dye gets into the surface of the fibers by diffusion, presumably forming some kind of solid solution of the dye in at least the surface of the polyester material.

The importance of this distinction is pointed out in Reinert itself, again noting column 21, the text beginning at line 59:

Cellulosic fibre materials are to be understood as meaning for example the natural cellulose fibre, such as cotton, linen and hemp, and also cellulose pulp and regenerated cellulose. **The direct dyes are also suitable for treating hydroxyl-containing fibres** present in blend fabrics,

for example blends of cotton with polyester fibres or polyamide fibres. [Emphasis added.]

What Reinert is correctly stating here is that the direct dyes will work on the cellulosic fibers in blends, i.e. those containing hydroxyl groups, but will not serve to dye the synthetic polymer fibers.

Thus, assuming for the sake of argument only that it would have been obvious to combine Geisel and Reinert by modifying Geisel in view of Reinert to use direct anthraquinone dyes (contrary to Appellant's position), then Appellant's product would still not be obtained. The proposed combination does not reach the present invention.

The Examiner states near the top of page 4 of the Final Action that the properties and the advantages of the claimed product are not part of the claim, and the implication (and result evidenced by the rejection) is that such properties may be ignored. It is not so that the properties and advantages may be properly ignored, as every invention must be considered "as a whole" as stated in the statute. Such properties do not exist in the prior art, and cannot be assumed to inherently exist in the prior art, because inherency in the prior art must be "reasonably certain" or "inevitable", *In re Brink*, 164 USPQ 247, 249 (CCPA 1970); *Ex parte Cyba*, 155 USPQ 756, 757 (1967); *In re Oelrich*, 212 USPQ



323, 326 (CCPA 1981). It is clearly not reasonably certain or inevitable that any prior art fabrics possess the new properties and advantages of the fabric of the present invention, and these points are discussed further below in reply to the rejection of claims 13 and 14.

Appellant respectfully notes that it is not the selection of one feature that provides the improved results of the present invention, but instead the combination of various factors. The selection of polyester, together with the nature of the yarn (continuous filament or monofilament), together with the yarn having been wet-dyed with an anthraquinone-based disperse dye, all as called for in claim 1, provide an exceptional product.

The new product according to the present invention has astonishing new properties and advantages as follows.

- The wet-dyeing of the awning fabric is completely independent from the production of the filaments so that it is possible to obtain colors as desired by the Appellant for the awnings independent of the color range of the producer of the filaments, as it has been so limited in the prior art.

- The surface of the fabric is silk-like smooth. Therefore, a very neat appearance is obtained as compared with prior art awnings and the smooth surface prevents the pollution of the awning.

- The elasticity is higher than previously known and therefore cuttings formed at the occasion of winding-up the awning are avoided.

- Tear-resistance is twice as high as with conventional awnings.

- There is a certain transparency for visual light, which leads to a friendly atmosphere whereas ultraviolet radiation is kept out.

To summarize, the proposed combination would not have been obvious for the reasons given above, and this is so even if it were known prior to the present invention to dye polyester fibers with disperse dyes; and, in any event, the proposed combination would not reach the present invention.

The examiner has not met his burden. Appellant respectfully requests reversal of the Examiner's decision and withdrawal of the rejection of claim 1.

Claim 2 depends from claim 1 and recites that the fabric has a weight per unit area of 200 to 250 g/sqm. This weight per unit area is considerably lower than that of conventional awning fabrics, which is over 300 g/sqm (page 3, lines 3-6). Since the Examiner does not mention claim 2 or the features recited in the dependent portion thereof in the rejection set forth in paragraph 4 of the Final Action, a

*prima facie* case of obviousness has not even been set forth, let alone established. For this reason alone, the rejection of claim 2 should be reversed.

Moreover, claim 2 depends from and incorporates the subject matter of claim 1, and thus defines over Geisel and Reinert for the reasons pointed out above.

Further, the weight of the fabric is not taught by either patent, nor is any teaching provided concerning a weight for the fabric that would be desired.

For these reasons, Appellant respectfully requests reversal of the rejection of claim 2 as being unpatentable over Geisel in view of Reinert.

Claim 4 depends from claim 1 and recites that a UV block is provided. Claim 5 depends from claim 4 and recites that the UV block is triazine-derivative based. Since the Examiner does not mention claim 4 and 5 in the rejection set forth in paragraph 4, a *prima facie* case of obviousness has not even been set forth, let alone established. For this reason alone, the rejection of claim 4 and 5 should be reversed.

Moreover, claims 4 and 5 depend from and incorporate the subject matter of claim 1, and thus define over Geisel and Reinert for the reasons pointed out above.

Claim 6 depends from claim 5, and recites that the polyester yarn is round. The Examiner assumes fibers that have a round cross section are used in the prior art. The Examiner states, without support, that round fibers are the "default fiber shape in the industry" (page 3-4) and that there is a strong presumption that round fibers would be used because it would take additional time and expense to use anything other than round. Further, the Examiner concludes that if "round fibers are not inherently used ... it would be obvious to utilize round fibers..."

The Examiner's position is improper for two reasons. First, the fibers must not only be round in cross section, but must also be continuous filament or monofilament; round without being continuous filament or monofilament is inadequate. Secondly, many fibers are produced of cross section other than round, and inherency may not be relied upon unless it is necessarily so, without exception, *In re Brink*, 164 USPQ 247, 249.

As discussed above, the selection of polyester, together with the nature of the yarn (continuous filament or monofilament), together with the yarn having been wet-dyed with an anthraquinone-based disperse dye, all as called for in claim 1, provides an exceptional product, and making the filament cross section round contributes (in combination with

the aforementioned features) further to a superior product. Such a superior product is not taught by the prior art of record.

For at least these reasons, and because claim 6 depends from and includes the features of claims 1, 4 and 5, Appellant respectfully submits that claim 6 is patentable over the cited prior art. Reversal of the rejection is thus respectfully requested.

Claim 11 depends from claim 1 and recites an awning comprising the awning fabric of claim 1. Claim 11 is patentable for the reasons discussed above with respect to claim 1.

**2. Claim 12 Defines Non-Obvious Subject Matter Over Geisel  
in view of Reinert and Curtis under 35 U.S.C. § 103(a)**

Claim 12 depends from and incorporates the subject matter of claims 1 and 11 from which it indirectly depends and recites that the awning of claim 11 is a sun room awning or an awning with articulated arms. Curtis has not been cited to make up for the deficiencies of Geisel in view of Reinert as pointed out above, and indeed does not do so.

Curtis discloses an awning assembly with telescoping support arms. There is no disclosure of the selection of polyester, together with the nature of the yarn (continuous

filament or monofilament), together with the yarn having been wet-dyed with an anthraquinone-based disperse dye, all as called for in claim 1. Accordingly, even if it were obvious to combine Curtis with Geisel, the subject matter of claim 12 would not be reached for the reasons pointed out above.

The Examiner has not met his burden, and Appellant respectfully requests reversal and withdrawal of this rejection.

**3. Claims 13-14 Define Non-Obvious Subject Matter over Geisel in view of Reinert and Delker under 35 U.S.C. § 103(a)**

Claim 13 recites an awning fabric having a number of particular characteristics. The Appellant, who is an expert in this art, believes that no awning fabric having the features of claim 13 has ever been produced. Such features are certainly not disclosed in the references cited.

Appellant respectfully notes that conventional awning fabrics usually have a weft density of 30 warp threads/cm and 15 weft threads/cm which results in a weight unit area of 300 g/m<sup>2</sup> or greater. Appellant's awning fabric as called for in claim 13 is denser in the number of threads than is conventional, and still weighs less (as does the fabric of claim 2), i.e. the

awning fabric of claim 13 is very dense, but flatter and lighter than what is conventional for awning fabrics.

Appellant respectfully notes that the burden is initially on the Examiner to establish a *prima facie* case of obviousness. With respect, it is not sufficient for an examiner to simply state that "it would have been an obvious modification to alter the weaving properties of the fabric" when there is no evidence whatsoever in support of such a conclusion. Appellant respectfully relies on *Ex parte Levengood*, 28 USPQ2d 1300, 1301-1302 (BPAI 1993):

In order to establish a *prima facie* case of obviousness, it is necessary for the Examiner to present **evidence**, preferably in the form of some teaching, suggestion, incentive or inference in the applied prior art, or in the form of generally available knowledge, that one having ordinary skill in the art **would have been led** to arrive at the claimed invention. [Citations omitted; italics in original].

Where is the evidence to support the conclusion of "an obvious modification"?

At best, the Examiner's comments regarding obviousness amount to an assertion that one of ordinary skill in the relevant art would have been able to arrive at appellant's invention because he had the necessary skills.... This is an inappropriate standard for obviousness. [Citations omitted] That which is within the capabilities of one skilled in the art is not synonymous with obviousness [Citations Omitted].

There is no basis for the conclusion in the rejection of the obviousness of features that are not shown in the prior art.

Appellant understands the expression "it would have been an obvious modification to alter the weaving properties of the fabric" by the person skilled in the art to mean that what the Appellant did is, in the Examiner's view, a mere matter of choice which could be done by any person skilled in the art (if he or she wanted to do so). But see *Ex parte Haas et al*, 144 USPQ 98, 99 (Bd. of Pat. App. 1964):

The Examiner ... says that [applicants' changes] are a matter of choice. It is not a matter of choice presented by the prior art [which] gives only one choice; a process which will not yield these new and improved results.

Also see *Ex parte Deere*, 118 USPQ 541, 544 (Bd. of Pat. App. 1957); and *Ex parte Krantz*, 61 USPQ 238 (Bd. of Pat. App. 1943).

In an unpublished decision (September 30, 1986) in Appeal 580-81, the Board, in reversing a rejection in a case where the Examiner had brushed aside a recitation appearing in the claim under appeal, concluded as follows:

The Examiner's assertion at page 4 of the Answer that the proposed modification would have been "an obvious matter of engineering design choice well within the level of one of ordinary skill in the art" is a conclusion, rather than a reason.



Appellant believes such reasoning of the Board as expressed immediately above is correct, and respectfully submits that it is contrary to fact in the present case that providing Appellant's fabric having the claimed feature would require nothing more than an obvious modification; it is also contrary to the well established case law, including that cited above, which suggests that it is a necessary requirement that the prior art shows that alternatives are equivalent (see *In re Scott*, 139 USPQ 297 (CCPA 1963); and *In re Flint*, 141 USPQ 299 (CCPA 1964)) before the Examiner can validly hold that doing one in place of the other would simply have been obvious. There is no such prior art of record in the present case.

Lastly, for a more recent decision on this point, attention is respectfully invited to *In re Chu*, 36 USPQ 2d 1089, 1095 (Fed Cir 1995).

In short, Appellant respectfully submits that a rejection based on what effectively amounts to "official notice" that the features recited in claims 13 and 14 are common in fabrics for awnings is not proper, especially when Appellant knows that the conclusion expressed in the rejection is simply incorrect. If prior art exists contrary to Appellant's knowledge, then Appellant has a right to face and examine and contest such prior art. If no such prior art exists, the claims should be allowed.

Appellant respectfully submits that Delker is not relevant to the present invention. Delker discloses high strength core-sheath monofilaments comprising a core of a thermoplastic polyester and a sheath of a different thermoplastic polyester. Delker does not disclose anything which makes up for the deficiencies of the proposed combination of Geisel in view of Reinert as discussed above, nor does Delker provide any teaching which would lead to the features of Appellant's fabric which no prior art shows, as noted above, namely the claimed warp rate and weft density, or the weight of the fabric.

Delker is cited for its teaching that its monofilaments may include small amounts of admixtures and additives which are nonpolymeric in nature, such as delustrants or lubricants. Merriam-Webster's Third International Unabridged Dictionary defines a delustrant as "a chemical agent for reducing the brightness of yarns and fabrics." One of ordinary skill in the art would not have been motivated to combine the teaching of adding a delustrant according to Delker to the fibers of Geisel in providing a luminescent fiber. As discussed above, such a modification would fly in the face of the stated purpose of Geisel to provide a luminescent fiber.

For at least these reasons, reversal of the Examiner's rejection and withdrawal of the rejection of claims 13 and 14 is in order and is respectfully requested. Again, the Examiner has not met his burden.

4. **Claims 1-6 and 11 Define Non-Obvious Subject Matter over Xiao in view of Linville and Reinert under 35 U.S.C. § 103(a)**

Xiao is directed to a water repellant, stain resistant, weatherable **coated** fabric wherein the coating is composed of both acrylic and polyurethane lattices also including a cross linker (see the Abstract). Such a fabric may be used for "sun awnings, lawn and patio umbrellas, boat covers, and the like" (Column 4, lines 5 and 6).

The rejection states that the awning fabric of Xiao comprises continuous polyester fibers. Appellant sees no such disclosure. Instead, column 4, lines 17-24 reads as follows:

The subject coatings are aqueous dispersions that may be applied to synthetic textile fabrics in one or more passes to provide treated fabrics with the physical properties desired. By the term "synthetic fabric" is meant a fabric containing at least 40 weight% of synthetic polymer fibers, i.e. nylon fibers, polyester fibers, and the like. The fibers useful in the present invention are preferably those which can be transfer-printed. The textile fabrics are woven.

There is no disclosure of what is called for in claim 1, and particularly polyester continuous filament yarn or a polyester monofilament yarn, let alone such a yarn which is wet-dyed with an anthraquinone-based disperse dye.

Reinert has been discussed above. As there noted, it relates to the **direct** dyeing of fibers containing hydroxy groups, and does not make up for the deficiencies of Xiao.

Linville has been cited only for the purpose of providing evidence, according to the Examiner's position, that it would have been obvious from Linville to substitute monofilaments in the fabric of Xiao "to reduce the weight of the fabric", although Appellant respectfully submits that Linville does not teach that monofilaments reduce fabric weight compared to the use of "fibers". (The advantages achieved according to Linville occur by the provision of the Linville disclosed laminated construction, not simply by the use of monofilaments.) Regardless, even if it were obvious to substitute polyester monofilaments in the Xiao fabric for Xiao's fibers, Xiao would still be deficient for the reasons pointed out above.

Reinert has been cited for the same reasons it was relied upon in the rejection based on Geisel in view of Reinert, and Appellant's remarks made above against such rejection generally apply to the proposed combination of Xiao

in view of Reinert. In this regard, Appellant wishes to particularly emphasize the fact that Reinert does not make obvious a disperse dyed fabric.

Claim 2 depends from and incorporates the subject matter of claim 1, and thus defines over the proposed combination for the reasons pointed out above. Moreover, as the rejection points out, the polyester fabric described at the bottom of column 15 of Xiao has a weight that exceeds the weight called for in claim 2, even before its impregnation. Furthermore, after impregnation, the polyester fabric of Xiao will weigh even more than  $278 \text{ g/m}^2$ , it being noted that solids take up is 4-5% relative to the weight of the uncoated fabric, i.e., the resultant coated fabric will weigh a minimum of about  $290 \text{ g/m}^2$ . Therefore, if anything, Xiao teaches away from the dependent portion of claim 2.

The rejection states that Appellant's argument that Xiao's fabric is heavier than the claimed fabric "is not germane to the instant rejection because the Examiner previously set forth the position that it would have been obvious to reduce the weight of Xiao's fabric." Appellant does not understand this kind of reasoning. Is the Examiner saying that it would be obvious to do something contrary to what the reference says just because the Examiner thinks so,

having read Appellant's specification? If so, what is the basis for "flying in the face" of the reference?

Again, Appellant respectfully submits that a rejection based on "official notice" or any conclusion based on something not taught by the references is not proper. Xiao does not tell how to reduce the weight, but tells only how to increase the weight of the fabric. This feature of Appellant's invention is not taught or enabled by Xiao, or by any possible combination of the references. For at least this reason, Appellant respectfully submits that claim 2 is patentable over the prior art as set forth in the Office Action. Again the Examiner has not met his burden.

With regard to claims 4 and 5, Xiao has been discussed above, and its deficiencies pointed out. Reinert does not make up for those deficiencies, and has not been cited to do so. Therefore, even if the combination were obvious, it would not reach claims 4-5 which incorporate the subject matter of claim 1.

Moreover, as discussed above, Reinert describes a process of dyeing cellulose filaments by wet-dyeing. This clearly has nothing to do with wet-dyeing polyester. The person of ordinary skill in the art would have had no reason or basis for considering combining of these two documents,

which have no relation to one another, dealing with totally different materials. For at least this reason, Appellant respectfully submits that claims 4 and 5 are patentable over the prior art in combination as set forth in the Office Action.

As regards the feature added in the dependent portion of claim 6, the rejection assumes fibers that have a round cross section. But this is improper for two reasons, discussed more fully above. First, the fibers must not only be round in cross section, but must also be continuous filament or monofilament; round without being continuous filament or monofilament is inadequate. Second, many fibers are produced of cross section other than round, and inherency may not be relied upon unless it is reasonably certain, *In re Brink*, 164 USPQ 247, 249. For at least these reasons, Appellant respectfully submits that claim 6 is patentable over the prior art of record.

With respect to the commentary of the rejection concerning claim 11, it is noted that no specific discussion of claim 11 is set forth in the final rejection mailed on September 9, 2003. For this reason alone, the rejection of claim 11 ought to be reversed.

However, in an effort to address all issues at one time, Appellant assumes that the Examiner's remarks regarding claim 11 set forth in the Office Action mailed on March 31, 2003, were intended to be set forth again in the final rejection. Addressing those remarks, Appellant does not understand where the prior art indicates that "[s]uch a modification would have been motivated by the desire to render the awning more commercially successful" as asserted. If this comes from anywhere, it comes from impermissible hindsight reference to Appellant's disclosure, not from any known prior art.

The Examiner has not met his burden. Appellant respectfully requests reversal of the rejection under §103 of claims 1-6 and 11 based on Xiao in view of Linville and Reinert.

**5. Claim 12 Defines Non-Obvious Subject Matter Over Xiao in view of Linville, Reinert and Curtis under 35 U.S.C. § 103(a)**

As indicated above, claim 12 depends ultimately from claim 1 and incorporates the subject matter thereof. Xiao in view of Linville and Reinert do not make obvious the features of claim 1, and therefore do not make obvious the features of claim 12, which incorporates claim 1. Curtis does not make up



for those deficiencies, and has not been cited to do so as discussed above. Accordingly, the proposed combination, even if obvious (respectfully denied), would not reach claim 12.

Appellant respectfully requests reversal and withdrawal of the rejection of claim 12.

**6. Claims 13 and 14 Defines Non-Obvious Subject Matter Over  
Xiao in view of Linville, Reinert and Delker under 35  
U.S.C. § 103(a)**

All the citations have been discussed above, so no further discussion of the references individually is necessary.

Appellant maintains for reasons pointed out above that even if the combination were obvious, respectfully denied, the combination would not reach the claimed subject matter for at least two reasons:

(1) No reference provides the feature of the disperse dyes, and

(2) The rejection itself indicates that the references do not teach the claimed warp rate and weft density (nor do they teach the weight of the fabric).

Appellant repeats that to his best knowledge an awning fabric with the features of claim 13 has never been produced. Its features may have been desirable, but no one in

the awning art or the awning fabric art knew how to produce such a fabric. However, by using disperse dyes according to the invention, it is possible to produce such a fabric with polyester filaments, thus providing a very dense but flatter and lighter fabric compared to fabrics that have been common for conventional awnings. Conventional awning fabrics, which have been produced for many, many years, usually have a weft density of 30 warp threads/cm and 15 weft threads/cm, resulting in a weight per unit area of at least 300g/m<sup>2</sup>.

Appellant's invention provides a number of advantages which have been delineated above. The prior art does not make Appellant's invention obvious. The Examiner has again not met his burden, and reversal of the Examiner and withdrawal of this rejection are therefore respectfully urged.

#### CONCLUSION

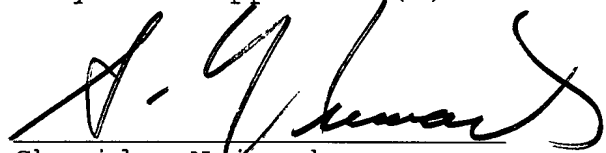
The proposed combinations would not have been obvious to the person of ordinary skill in the art at the time the present invention was made because, to at least some extent, the references are inconsistent and not validly combinable for the reasons pointed out above. Moreover, even if properly combined, the resultant reconstructions would not reach the claimed subject matter.

The claims as submitted are believed to truly set forth the inventive concept of the present invention and to define over the prior art. The Examiner has not met his burden. Accordingly, reversal of the Examiner and allowance of claims 1-2, 4-6, and 11-14 are earnestly solicited.

Respectfully submitted,

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By

A handwritten signature in black ink, appearing to read 'S. Neimark', written over a horizontal line.

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APPENDIX A- Claims Under Appeal

1. A woven awning fabric, comprising substantially entirely wet-dyed polyester continuous filament yarn and/or polyester monofilament yarn,

wherein said wet-dyed yarn is dyed with an anthraquinone-based disperse dye.

2. An awning fabric according to claim 1, wherein it has a weight per unit area of 200 to 250 g/sqm.

4. An awning fabric according to claim 1, wherein a UV block is provided.

5. An awning fabric according to claim 4, wherein the UV block is triazine-derivative based.

6. An awning fabric according to claim 5, wherein the polyester yarn is round.

11. An awning comprising an awning fabric according to claim 1.

12. The awning of claim 11 which is a sun room awning or an awning with articulated arms.

13. An awning fabric woven of polyester filament yarn

dyed with a disperse dye and having a round cross section and

containing an amount no greater than 0.05% of delustrants and lubricants,

said polyester filament yarn being a continuous filament yarn and/or a monofilament yarn, said fabric having a weft density of 35-50 filaments per cm, a warp rate of 20-25 filament per cm and a weight of 200-250 g/sqm.

14. The awning fabric of claim 13 wherein said disperse dye comprises a nitro dye, an azo dye or anthraquinone dye, and contains a triazine based UV block.